

METHODS AND APPARATUS FOR UPDATING A REDUCTION RATIO

Cross-Reference to Related Applications

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The present application is related to U.S. Patent Application No. 09/867,966
(Attorney Docket No. CISC219) by Wu et al., and titled Methods and Apparatus for
Transform Coefficient Filtering and U.S. Patent Application No. 09/870,177 now U.S. Patent 6,763,070 (Attorney
Docket No. CISC234) by Lee et al., and titled Methods and Apparatus for Selecting a
10 Cut-off Index, both filed on the same day as the present application. Each of the above
patent applications is incorporated herein by reference for all purposes.

Background of the Invention

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The present invention relates to rescaling data. More specifically, the present
invention relates to updating reduction ratios used for rescaling data sequences. Still
more specifically, the present invention provides techniques for determining reduction
ratios for modifying transform coefficients associated with an input data sequence (e.g.
an audio segment or a video sequence) to provide modified transform coefficients
20 associated with a modified output data sequence.

Video data is one particularly relevant form of data that can benefit from
improved techniques for rescaling. Generally, compressing data or further
compressing compressed data is referred to herein as rescaling data. Video rescaling
25 schemes allow digitized video frames to be represented digitally in an efficient manner.
Rescaling digital video makes it practical to transmit the compressed signal by digital
channels at a fraction of the bandwidth required to transmit the original signal without
compression. International standards have been created on video compression schemes.
The standards include MPEG-1, MPEG-2, MPEG-4, H.261, H.262, H.263, H.263+,
30 etc. The standardized compression schemes mostly rely on several key algorithm
schemes: motion compensated transform coding (for example, DCT transforms or

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